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Subject: **Sizing of Gas Piping**

Reference: **N.J.A.C. 5:23-3.22,**
Fuel Gas Subcode Section
402.3

There are several charts in the Fuel Gas Subcode for sizing gas piping systems. The tables list the maximum capacity of the system based on the piping system characteristics (such as the length of the piping system, the diameter of the pipe, and the system material -- i.e., piping or semi-rigid tubing) and the delivery conditions of the gas (such as the specific gravity, delivery pressure, and pressure drop of the gas). For natural gas, the Department of Community Affairs has been advised by PSE&G, New Jersey Natural Gas, South Jersey Gas, and Elizabethtown Gas that only some of the tables are appropriate within the State of New Jersey when these gas utilities are the supplier. Tables that should be used when the above utilities supply gas are based on a specific gravity of 0.6, a system pressure of 0.5 PSIG or less, and a pressure drop of 0.3 inch of water column. Thus, Tables 402.4(1), 402.4(5), 402.4(7), and 402.4(19) are the tables that should generally be used. Only when specific information is given on the plans that state natural gas will be delivered at conditions other than those described above should the appropriate other gas pipe sizing tables be used.

It should be noted that Tables 402.4(1), 402.4(5), 402.4(7), and 402.4(19) may not be appropriate for sizing Liquefied Petroleum Gas (LPG) systems. Unlike natural gas, where design conditions for low-pressure systems have been standardized by the utilities, LPG systems are designed and installed by a number of different suppliers, so no such standardization exists. Supply pressures in many cases will be higher for LPG systems, resulting in smaller pipe sizing than is required if Tables 402.4(1), 402.4(5), 402.4(7), and 402.4(19) are used. Since no uniform supply conditions are available, it is important that information concerning specific gravity, pressure, and pressure drop are obtained from the supplier, and that the appropriate table from the Fuel Gas Subcode is used.

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